REMARKS/ARGUMENTS

In this response, the Applicant has cancelled claims 1 and 2, without prejudice or disclaimer, and added claims 3–43 to particularly point out certain novel features of the present invention. The Applicant respectfully submits that the aforementioned changes do not add new matter, and that the new claims are supported by the previously filed specification.

Rejection Under 35 U.S.C. §102

The Examiner has rejected claims 1 and 2 under 35 U.S.C. §102(b) as anticipated by Smith et al. (US 5,751.415). Accordingly, claims 1 and 2 have been cancelled without prejudice or disclaimer.

New Claims

The Applicant has added claims 3–43, particularly pointing out certain features of the present invention.

New independent claims 1 and 25 are directed to a system and method for spectroscopically differentiating fluid flowing in a conduit where light Raman scattered from the fluid travels to the spectrometer. Moreover, the sample cell is mounted adjacent the conduit, as is the Raman spectrometer. The system described in Smith et al. has light traveling from the fluid to the spectrometer via a fiber. Placing the spectrometer in a remote location relative to the light source can be disadvantageous because a single operator cannot simultaneously operate both.

New independent claims 9 and 29 are directed to a system and method for spectroscopically differentiating fluid flowing in a conduit by using a multimode laser. An external cavity device allows a single mode of the laser to be locked in. Such a

design allows greater flexibility for analyzing more Raman features. In contrast, Smith et al. does not teach such a multi-mode laser with an external cavity device for locking in a single mode.

Finally, new independent claims 16 and 35 are directed to a system and method for spectroscopically differentiating fluid flowing in a conduit by using a computer device for determining whether the fluid is gasoline. This is achieved by comparing the Raman spectrum to a reference set of spectra, each member of the set of spectra corresponding to a compound characteristic of gasoline. A fluorescence detector is included for measuring the fluorescence of the fluid. If the computer device determines that the fluid is not gasoline, an output value is provided that is a function of the fluorescence and that is indicative of the identity of the fluid, and if the computer device determines that the fluid is gasoline, the computer device performs a further analysis on the fluid to gain information about the identity thereof. Smith et al. does not teach such a system or method.

Instead, Smith et al. teach (col. 9, lines 23–27) that by measuring the relative intensities of "octane enhancers" such as m-, o- and p-xylene, isooctane, ethyl benzene and toluene to the intensities of aliphatics, one can develop a model that will determine the octane rating of the fuel. Further, in col. 9, lines 41–50 Smith et al. teach that a calibration model development must include a full spectrum analysis to capture the range of structures that relate to octane number. Since the composition of fuels can vary considerably, the algorithm must have robust predictive capabilities. For this task, it is currently preferred to first use the principal component regression approach of partial least squares or "PLS." For this purpose, samples from a variety of refineries are brought into the calibration set.

Thus, the information obtained and the method by which it is obtained differ in the instant invention and in Smith et al.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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